## **AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method for calculation of filtered channel estimation values
radio systems, comprising the following steps:
determining a sequence of unfiltered channel estimation values;
selecting a specific set of filter coefficients from two or more filter coefficient se
with the filter coefficients being calculated on the basis of the MMSE optimality criterion for
predetermined recursive digital filter; and
filtering of the sequence of unfiltered channel estimation values by means of t
recursive digital filter using the selected filter coefficients in order to calculate the filtered chann
estimation values.
2. (Original) The method according to Claim 1, wherein the specific set of filter coefficients
selected as a function of the relative speed between the transmitter and the receiver and of t
signal-to-interference and noise ratio.
3. (Currently Amended) The method according to Claim 1, wherein sets of filter coefficier
are calculated for different relative speeds between the transmitter and the receiver and for a
desired signal-to-interference and noise ratio, and wherein the selection and filter steps compris
the steps of:
selecting a specific set of filter coefficients as a function of the relative spe
between the transmitter and the receiver; and
filtering of sequences of unfiltered channel estimation values which are associate
with different transmission paths, using the filter coefficients of the same selected specific set.

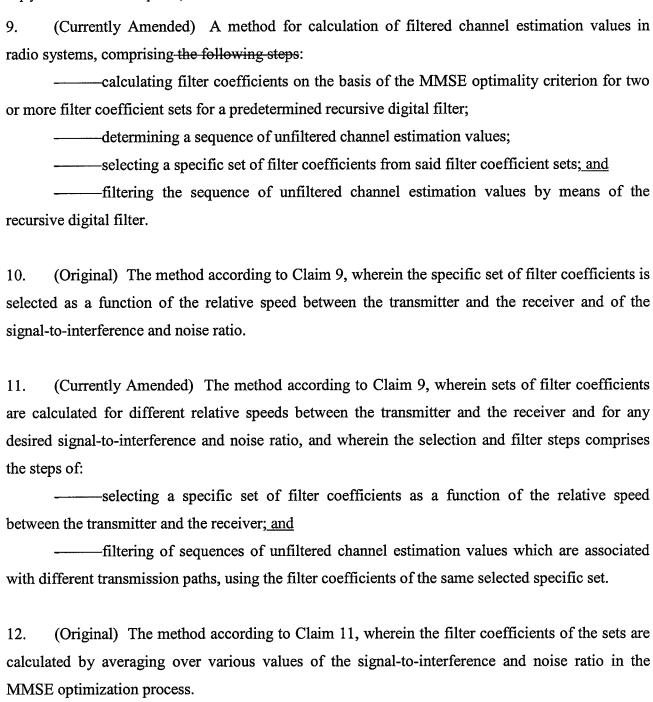
4. (Original) The method according to Claim 3, wherein the filter coefficients of said sets are calculated by averaging over various values of the signal-to-interference and noise ratio in the MMSE optimization process.

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5. (Currently Amended) An apparatus for calculation of filtered channel estimation values in radio systems, comprising:

——means for determination of a sequence of unfiltered channel estimation values, and
——means for selection of a specific set of filter coefficients from two or more filter
coefficient sets, with the filter coefficients being calculated on the basis of the MMSE optimality
criterion for a predetermined recursive digital filter, wherein the predetermined recursive digital
filter for filtering of the sequence of unfiltered channel estimation values uses the selected filter
coefficients in order to calculate the filtered channel estimation values.

- 6. (Original) The apparatus according to Claim 5, wherein the means for selection of the specific set of filter coefficients is designed to carry out the selection process as a function of the relative speed between the transmitter and the receiver and of the signal-to-interference and noise ratio.
- 7. (Currently Amended) The apparatus according to Claim 5, further comprising:
- two or more sets of filter coefficients, with each set being calculated for a specific relative speed between the transmitter and the receiver and for any given signal-to-interference and noise ratio, and wherein
- the means for selection of a specific set of filter coefficients is designed to make the selection as a function of the relative speed between the transmitter and the receiver,
- two or more digital filters are provided for filtering sequences of unfiltered channel estimation values which are each associated with different transmission paths, and
  - the filters are configured using the same filter coefficients from the selected set.
- 8. (Original) The apparatus according to Claim 7, wherein the filter coefficients of said sets are calculated by averaging over different values of the signal-to-interference and noise ratio during the MMSE optimization.



- 13. (New) An apparatus for calculating filtered channel estimation values in a radio system, comprising:
  - a determiner configured to determine a sequence of unfiltered channel estimation values;

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a recursive digital filter configured to filter the unfiltered channel estimation values in order

to calculate the filtered channel estimation values, the recursive digital filter being configured to use

a specific one from two or more filter coefficient sets; and

a selector configured to select the specific set of filter coefficients from the two or more

filter coefficient sets, with the filter coefficients being calculated based on the MMSE optimality

criterion for the recursive digital filter.

14. (New) The apparatus according to claim 13, wherein the filter coefficients of said sets are

calculated by averaging over various values of the signal-to-interfere and noise ratio in the MMSE

optimization process.

15. (New) An apparatus for calculating filtered channel estimation values in radio systems,

comprising:

a determiner configured to determine a sequence of unfiltered channel estimation values;

and

a selector configured to select a specific set of filter coefficients from two or more filter

coefficient sets, the filter coefficients being calculated based on the MMSE optimality criterion for a

predetermined recursive digital filter, wherein the predetermined recursive digital filter is

configured to filter the sequence of unfiltered channel estimation values using the selected filter

coefficients in order to calculate the filtered channel estimation values.

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